

# EXHIBIT 101



## News / China set to step in and hold down box line rates, with ocean freight 'a global mess'



© Chuyu |

By [Alex Lennane](#) 11/09/2020

Chinese authorities are set to interfere in both pricing and capacity management on the transpacific, as rates soared to record highs again this week.

China's ministry of communications today discussed refusing to allow carriers to increase the spot rate from China to the US, and that their suspended sailings must be reinstated from week 42.

The move was reported by *Zest Shipping Media*, but not confirmed by the government. Zest noted that Cosco had already abandoned its planned GRI for 15 September, and other carriers are expected to follow suit.

Sea Intelligence's Lars Jensen noted: "This would have an unprecedented impact on the market and, more worryingly, potentially derail the carriers' ability to manage capacity in the face of extreme demand volatility.



“Placing a ban on blank sailings is essentially a non-issue right now, in a tight market, but it is highly likely we will see another downturn and if carriers are barred from managing capacity, this becomes problematic.”

The move was no doubt triggered by soaring rates. This week’s SCFI shows the market tightening again, impacting all trades.

For the seventh consecutive week, transpacific trade to the US west coast was above \$3,000 per feu, reaching a new high of \$3,813, although, as Mr Jensen pointed out, “the rate of increase has slowed down”.

He added: “We now also see a strong impact on the CCFI contract rate index to the USWC, where contract rate levels have increased 12% in the past four weeks, and 44% since the beginning of the pandemic.”

One forwarder told *The Loadstar* high demand on transpacific routes was having a knock-on effect in Europe.

“It has negative consequences for westbound Europe, as the margin is more attractive on the American routes, so more of the limited empty containers are going on that trade, impacting Europe demand.”

Rates to east coast South America, meanwhile, have rebounded after falling to \$1,000 per teu as lockdown began. In July, noted Mr Jensen, rates collapsed to \$500 per teu, but have risen to \$2,901 per teu in just eight weeks.

He pointed to another record high: rates to West Africa have increased to \$3,105 per teu, and to South Africa to \$1,416 per teu, which while not quite a record, is “a sharp increase from \$611 per teu only 10 weeks ago”.

Earlier in the week, Flexport said it thought GRIs were highly likely to be implemented next week on Asia-Europe.

“The market is expected to be strong and full throughout September and demand will probably remain high until end of October. Carriers have announced blank sailings for post-Golden Week, so capacity will be tight.”

But there are bigger issues than record high rates, claim forwarders.

“Carriers are struggling, even with the peak rates. Westbound is screwed, big-time,” said one European forwarder. “Roll pools are being created by carriers from Asia, and certain vessels are omitting ports, partly because of typhoons, which has created delays, with all the alliances affected.

“And the UK is carnage.”

He added: “Trying to get containers on vessels that do call, or don’t, is a lottery, despite what you pay, and then you need to find a way to get the vessels unloaded, if they aren’t redirected to another port.”

He said equipment shortages were “painful” at both the first and last mile.

“And then we have the Golden week congestion coming over the next few weeks. It really is quite miserable, and the reality of Covid, carrier capacity manipulation and other variables and dynamics is creating a global mess within supply chains, regardless of the efforts made to avoid the issues.”

Another source said he had seen an MSC ship moored off Singapore loaded with empty containers, to save on port storage costs, and added that other shipping lines were following suit, and that there were equipment shortages all over Asia.

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## Three Modern Product Tankers Join U.S.-Flag Fleet Under TSP Program



Courtesy Crowley / Stena Bulk

PUBLISHED MAY 17, 2023 3:16 PM BY [THE MARITIME EXECUTIVE \(HTTPS://MARITIME-EXECUTIVE.COM/AUTHOR/MAREX\)](https://maritime-executive.com/author/marex)

The U.S. Maritime Administration has signed an agreement with Crowley and Stena Bulk to reflag three product tankers into the U.S. registry and add them to the new Tanker Security Program (TSP).

"Crowley's team with Stena Bulk offers government customers a deep, full suite of capabilities to maintain an efficient, dependable supply chain with management that adds value by being able to meet needs quickly and innovatively," said Gavin Hughes, vice president of Crowley Government Solutions.

The deal will see the IMOIMAX tankers *Stena Immaculate*, *Stena Imperative* and *Stena Impeccable* join the U.S.-flagged, U.S.-crewed deep sea fleet, augmenting America's access to tanker capacity in time of need. The three tankers are all relatively young: CSSC Guangzhou Shipyard delivered all three in 2016-17 (<https://www.stenabulk.com/press-and-news/press-releases/ninth-imoimax-tanker-stena-immaculate-named-guangzhou-china>).

These modern vessels were built to be the best in their class for fuel efficiency, thanks to extensive R&D efforts by Stena Technik and Guangzhou. They can carry IMO 2 and 3 chemical cargoes as well as the clean petroleum products needed for defense logistics.

The tankers are owned by Stena Bulk and will be managed and crewed by Crowley under the new agreement.

The newly formed TSP provides a subsidy of \$6 million per year for up to 10 participating tankers, allowing the vessels to continue to trade commercially while remaining available for national defense purposes if called upon. TSP fills an "urgent need" identified by the Department of Defense for access to product tanker tonnage for national security requirements. This is particularly critical for operations across the wide expanse of the Pacific, an area of focus for defense planners. The TSP parallels the longstanding Maritime Security Program (MSP), which incentivizes 60 foreign-built vessels to sail under the U.S. flag with U.S. mariners at the helm.

Crowley and Stena Bulk have worked together before to serve U.S. government customers. In 2022, Crowley secured a Military Sealift Command charter contract to operate the ice-class tanker *Stena Polaris*, serving the bulk fuel needs of the U.S. Department of Defense in the Arctic and Antarctic.

Crowley has also worked with a related company, Stena RoRo, to advise MARAD on the acquisition of used ro/ro vessels to replenish the Ready Reserve Force (RRF) fleet.

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# EXHIBIT 103



CONGRESS

# Shipyards Serving US Navy Already Use Chinese-Built Drydocks

By SYDNEY J. FREEDBERG JR. on September 16, 2016 at 2:40 PM



The MV Blue Marlin carries massive Vigor drydock into Portland



WASHINGTON: At least three shipyards that do work for the US Navy have bought and used drydocks from [China](#). This would seem to lower the stakes for [Huntington-Ingalls Industries](#), currently searching for a Chinese drydock of its own with help from homestate Senator [Thad Cochran](#), as [reported](#) yesterday in the *Washington Post*.

BAE Systems' San Diego yard — which will receive its Chinese drydock [later this year](#) — and Vigor Industrial's Portland yard — which got its [\\$50 million Chinese dock in 2014](#) — do repair work for the US Navy. The Bath Iron Works yard in Maine which does build new warships got a [Chinese drydock in 2001](#). The Ingalls yard in

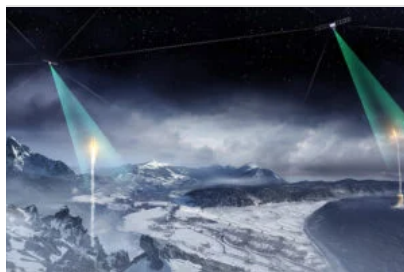
Pascagoula, which is currently shopping for one, also builds new warships, mostly notably LPD-17 *San Antonio*-class amphibious ships and DDG-51 *Arleigh Burke* destroyers.

Japan and South Korea also build drydocks, but it's not clear whether these two US allies can compete with China on price.

“I would point out that China is one of our largest trading partners,” one Hill staffer says. “I don't see how buying a drydock — not exactly sensitive technology — from them is any different than buying a bazillion iPhones and TVs.”

In fact, some Chinese products are used in Defense Department systems, including computer chips that reportedly have backdoors installed for easy hacking. By contrast, drydocks are hardly cutting-edge technology and simply support the physical hull of a ship, rather than connecting to its electronics.

Yet fears of Chinese competition — both economic and military — are so intense that only one of our usual congressional sources would comment. The Navy wouldn't comment either. Huntington-Ingalls spokeswoman Beci Brenton had only this to say: “On the record I can tell you: As many other shipyards in America, including those that also build Navy ships, have done in the last decade when needing to replace a large dry dock, Ingalls Shipbuilding is looking across the world market for a solution. Since no decision has been made, it is premature to discuss this effort further.”



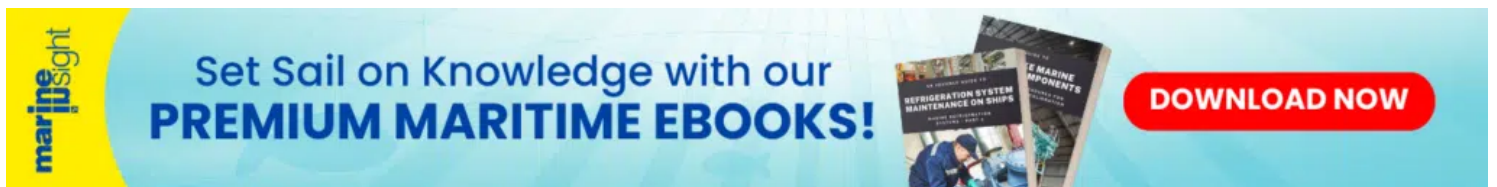
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From BREAKING DEFENSE

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# China's Shipbuilding Sector Sees Significant Growth With Rise In Vessel Deliveries And New Orders

By MI News Network | July 3, 2023 | Shipping News

The Chinese shipbuilding industry witnessed new vessel orders surge 49.5% yearly during the first five months of this year, official data revealed.

New orders, a significant indicator of the larger shipbuilding industry, were standing at a deadweight of 26.45 million tons (DWT) during the five-month phase, with a worldwide market share of 67.3%, per statistics released by Beijing's China Association of the National Shipbuilding Industry.



@CSSC\_global / Twitter

The nation's shipbuilding output rose by 15.4% every year to 16.47 million DWT from January to May. This accounted for 48.1% of the world's total.

By May end of this year, the holding orders in the sector summed up to 117.99 million DWT, up 15.5% year-on-year, thereby claiming a whopping 51.6% of the world's market share.

*References: China Daily, China, org.cn*

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## Newbuild orders at Chinese yards to exceed 50 million tonnes this year



(<https://dredgewire.com/newbuild-orders-at-chinese-yards-to-exceed-50-million-tonnes-this-y>

Posted on August 9, 2023

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## **Chinese shipbuilders are forecast to receive newbuilding orders in excess of 50 million dwt this year as the market rebounds from 2022.**

The China Association of the National Shipbuilding Industry (CANSI) forecast that Chinese yards would deliver over 42 million dwt in newbuildings in 2023.

However, the country's yards will take in an even higher volume of new orders with the volume forecast to exceed 50 million dwt. In the first half of the year as Seatrade Maritime News previously reported Chinese shipbuilders inked 37.67 million dwt of newbuilding orders in the first half of 2023.

As a result of the increased ordering this year, the orderbook on hand will remain steady at 120 million dwt.

In the first half of 2023 the export value of ships produced in China was \$11.2bn, an increase of 7.7% year-on-year. Bulk carriers, containerships, oil tankers, and gas carriers dominated the export market, totally accounting for 61.3% of the national volume. Bulkers, containerships, oil tankers and gas carriers each account for 26.5%, 22%, 6.8% and 6%, respectively of the total volume.

The 1,176 shipbuilding enterprise that meet a designated size requirement posted main business revenue of RMB276.7 billion (\$38.34 billion) in the first half, growing 24% year-on-year, while the profit was RMB9.5 billion, a substantial growth rate of 187.3%.

The association warns labour shortage of national shipbuilding industry amid the growing demands from the big increase in new orders and high-quality development of the industry.

Source (<https://www.seatrade-maritime.com/shipyards/newbuild-orders-chinese-yards-exceed-50-million-tonnes-year>)

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## Kumiai Continues Expansion Ordering 11 Multi-Purpose Ships from CSSC



Kumiai order what CSSC reports will be the largest multi-purpose ships (CSSC)

PUBLISHED APR 10, 2023 6:43 PM BY [THE MARITIME EXECUTIVE \(HTTPS://MARITIME-EXECUTIVE.COM/AUTHOR/MAREX\)](https://maritime-executive.com/author/marex)

China State Shipbuilding Corporation (CSSC) received a second large order last week, this one coming from Japan's Kumiai Senpaku, at the same time as they were signing the record containership order with France's CMA CGM group. After a slow start with newbuild orders at the start of 2023, China's industry received nearly 40 percent of the orders in March again putting it into first place in the shipbuilding sector. CSSC looks to continue the expansion of its orderbook.

Japan's Kumiai is moving aggressively with its orders with the latest deal being for 11 vessels from CSSC's Chengxi Shipbuilding and coming quickly after an order of VLGCs at Japan's Kawasaki Shipbuilding. The 50-year-old Japanese shipping company with its independently operated subsidiary Kumiai Navigation in Singapore is looking to grow operations, which include bulkers, LPG carriers, asphalt tankers, Ro-Ro passenger vessels, and currently a single product tanker and one molten sulfur carrier.

The order signed on April 7 consists of 10 multi-purpose ships which CSSC is calling the largest tonnage ships of their kind. They will be 84,500 dwt with a design that will be adaptable to high-efficiency loading for pulp, containers, new energy vehicles, and other goods. The ships will be highly energy efficient which according to the shipyard will permit them to be 50 percent below the EEDI Phase III baseline. They will have a high-pressure SCR system and a desulfurization tower.

Due to the flexibility of design, the vessels will be well-suited to Kumiai's focus on charter vessel operations. The order was placed in connection with CITIC Financial Leasing which will finance the vessel construction. No construction timeline or delivery dates were announced.

CSSC Chengxi highlights that it previously built four 62,000 tons multi-purpose ships, which were also the largest of their kind. They were delivered in 2021 and 2022.

Kumiai also ordered a single asphalt carrier. It will be a 17,000 ton vessel, that will measure approximately 525 feet. It will be outfitted with three independent liquid cargo tanks, and each tank will have four cargo holds to meet the requirements of most asphalt terminals around the world. They anticipate that this vessel will sail on routes from the Middle East to Asia and Africa.

CSSC highlights that due to the size of this order, the Chengxi Shipbuilding Company has already exceeded its target for 2023 newbuild orders. CSSC's goal is to leverage the yard's experience to expand its capabilities.

This order also expands the Japanese group's continued growth. At the end of March, Kumiai also ordered an 86,700 cbm combined liquefied petroleum gas (LPG) - liquefied ammonia gas (NH3) carrier powered by LPG fuel to be built by Kawasaki Heavy Industries. It will be the third combination LPG/NH3 carrier for Kumiai Navigation and is due for delivery in 2026. Kumiai was already scheduled to take delivery of two gas carriers in February and April 2025 from Kawasaki. Both of those vessels will operate under five-year charters to European companies.

Kumiai Navigation is also due to take delivery this year on a 64,000 dwt bulker newbuild from Japan's Oshima Shipbuilding. The Ultramax bulker was ordered at the beginning of 2021.

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# Maersk orders six methanol powered vessels

26 June 2023


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Image by Maric design

**Copenhagen, Denmark** – A.P. Moller - Maersk (Maersk) has made an order of six mid-sized container vessels – all having dual-fuel engines able to operate on green<sup>1</sup> methanol. Yangzijiang Shipbuilding Group will build the six 9,000 TEU vessels which will be delivered in 2026 and 2027.

"

With this order, we take another step in the green transformation of our fleet and towards our target of becoming net-zero in 2040. As with all our other vessel orders for the last two years, these ships will be able to run on green methanol.

Rabab Boulos  
Chief Infrastructure Officer at Maersk

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In 2021, Maersk ordered the world's first methanol-enabled container vessel following a commitment to the principle of only ordering newbuilt vessels that can sail on green fuels. Just two years later, the global orderbook stands at more than 100 methanol-enabled vessels.

By ordering additional six vessels, Maersk now has 25 methanol-enabled vessels on order.

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“ For these six container vessels, we have chosen a design and vessel size which make them very flexible from a deployment point of view. This will allow these vessels to fill many functions in both our current and our future network, thereby offering the flexibility our customers demand. Once phased in, they will replace existing capacity in our fleet.

Rabab Boulos  
Chief Infrastructure Officer at Maersk

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Later this summer, the first methanol-enabled vessel, a 2,100 TEU feeder vessel, will be delivered to Maersk.

### **About the six new vessels:**

- They have a capacity of 9,000 containers (Twenty Foot Equivalent - TEU)
  - Yangzijiang Shipbuilding Group will build the six vessels in China
  - The ships will be delivered from 2026 and with last delivery in March 2027
  - All of them have dual fuel engines making them able to operate on both fuel oil and methanol
  - Upon delivery, the vessels will replace existing capacity in the Maersk fleet
  - Replacing vessels in a similar size segment, the new vessels will reduce Maersk's annual greenhouse gas emissions by about 450,000 tons CO<sub>2</sub>e per year on a fuel lifecycle basis when operating on green methanol.
- 

<sup>1</sup> Maersk defines “green fuels” as fuels with low to very low GHG emissions over their life cycle compared to fossil fuels. Different green fuels achieve different life cycle reductions depending on their production pathway. By 'low' we refer to fuels with 65-80% life cycle GHG reductions

compared to fossil fuels. This covers, e.g., some biodiesels. "Very low" refers to fuels with 80-95% life cycle GHG reductions compared to fossil fuels. For commodity biofuels like, e.g., biodiesel for road transport, the minimum GHG savings are typically governed by standards like the EU Renewable Energy Directive (RED), and we align our minimum reduction thresholds for fuels to the RED. For future fuels like methanol where Maersk is involved in the project design and development, we strive to achieve higher GHG reductions than the legislative thresholds.

## About Maersk:

A.P. Moller - Maersk is an integrated logistics company working to connect and simplify its customers' supply chains. As a global leader in logistics services, the company operates in more than 130 countries and employs over 110,000 people world-wide. Maersk is aiming to reach net zero emissions by 2040 across the entire business with new technologies, new vessels, and green fuels.

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## JP Morgan Announces First Order for Methanol-Fueled Product Tankers in China

06-Oct-2023 6:08 PM [Journalist: Rene Swann](#)

JP Morgan Global Transportation Group (JPMGTG) has made a significant announcement regarding its inaugural order for methanol-fueled product tankers to be constructed in China. These vessels, each with a substantial deadweight capacity of 49,800, are poised for construction at Guangzhou Shipyard International (GSI) in China, with an anticipated delivery date in 2026. Furthermore, both ships have been contracted for time-charters with TotalEnergies.

This confirmation arrives approximately one month after the initial announcement of the order by shipbrokers. The decision marks JP Morgan's entry into the methanol fuel sector, representing a strategic move driven by the escalating interest in methanol as a viable solution, particularly within the container shipping and dry bulk sectors.

JP Morgan Global Transportation Group has previously ventured into investments related to liquefied natural gas (LNG) dual-fuel vessels. This new foray into a distinct fuel type is an attempt to establish an "additional vector of green transportation." Andrian Dacy, the Global Head of JP Morgan Alternative's Global Transportation Group, has expressed genuine enthusiasm for this expansion into an innovative fuel technology, firmly underlining its alignment with the company's commitment to mitigating greenhouse gas emissions.

Dacy has also placed significant emphasis on the expanded partnership between JP Morgan and TotalEnergies. These two entities have previously engaged in collaborations across diverse initiatives spanning multiple transportation segments. Now, they intend to unite their efforts in furthering TotalEnergies' global commitment to a cleaner energy future.

Jerome Cousin, the Senior Vice President of Shipping at TotalEnergies, has underscored the immense importance of integrating MR tankers powered by dual-fuel methanol technology into their time-chartered fleet. This strategic step is intrinsically aligned with TotalEnergies' unwavering dedication to reducing the carbon footprint of its shipping operations.

Additionally, TotalEnergies has successfully secured a time-charter agreement for four methanol dual-fuel chemical tankers with Hafnia, a Singapore-based company. Remarkably, all these vessels will also be constructed by GSI, with three of them earmarked for delivery in 2025 and the fourth slated to join the fleet in 2026.

The utilization of green methanol as a maritime fuel brings forth several compelling environmental advantages. Notably, it plays a pivotal role in reducing sulfur oxides (SOx) and particulate matter (PM) pollutants. Moreover, it delivers a substantial 60% reduction in nitrogen oxides (NOx) emissions. However, perhaps the most remarkable aspect of green methanol lies in its nearly 100% reduction in carbon dioxide (CO2) emissions when assessed on a tank-to-wake basis. These striking environmental benefits underscore the pivotal role of green methanol in mitigating the environmental impact of maritime transportation.

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05-Mar-2024 3:54 PM [Journalist: Nina Jiang](#)

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 01-Mar-2024 12:14 PM Journalist: Kim Chul Son

## Canadian Company Embarks on Methanol HPDI Project for Marine Applications

 27-Feb-2024 6:54 PM Journalist: Bob Duffler

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 28-Feb-2024 1:37 PM Journalist: Rene Swann

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# EXHIBIT 109



CMA CGM's LNG-powered CMA CGM Jacques Saadé under construction at China State Shipbuilding Corporation in 2020. Photo courtesy CMA CGM

## CMA CGM Orders 16 Large Containerships at China State Shipbuilding -Reports

[Mike Schuler](#)

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April 7, 2023

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French shipping giant CMA CGM has reportedly signed a shipbuilding order with China State Shipbuilding Corporation for 16 large containerships valued at over \$3 billion.

The order, which was reported by China state media, is being called the largest single-order for containerships ever placed in China.

The order comprises 12 15,000 TEU capacity ships powered by dual-fuel methanol and four 23,000 TEU capacity ships powered by dual-fuel LNG.

The 23,000 TEU ships will be built by CSSC shipyards and will measure 399.7-meters in length with a beam of 61.5 meters. The series of ships are believed to be the first in China built with dual-fuel methanol capability.

News of the order comes as French President Emmanuel Macron made a state visit to China to meet with China's Xi Jinping.

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# EXHIBIT 110





RESEARCH & DEVELOPMENT

## Maritime / China Unveils Plans For 'Largest Ever' Container Ship, Powered By Thorium Reactor

By David Dalton  
5 January 2024

*Ultra-large nuclear vessel designed to achieve zero emissions, says Beijing*



The KUN-24AP, would be powered by a thorium-based Generation IV molten salt reactor. Courtesy Jiangnan Shipyard.

China has unveiled plans for a nuclear-powered container ship expected to be the largest ever built, powered by a thorium reactor and boasting a load capacity of 24,000 standard containers.

Jiangnan Shipyard, a division of state-owned China State Shipbuilding Corporation (CSSC), said the KUN-24AP, featuring a thorium-based Generation IV molten salt

reactor, would prove safer and more efficient than the uranium reactors currently used to power warships.

China has an abundant supply of thorium meaning that it could be a cost-effective low-carbon alternative for shipping and other industries.

CSSC said in a social media post: "This type of ship has high safety because the reactor operates at high temperatures and low pressure, meaning it can avoid in principle core melting.

"The ultra-large nuclear container ship is designed to truly achieve 'zero emissions' during the ship's operating cycle," CSSC said.

The Hong Kong-based South China Morning Post said China got its first experimental thorium-based molten salt reactor running earlier this year. The newspaper said most countries have abandoned efforts to develop thorium reactors because of the complexity of the technology.

China has released little information about the reactor possibly because of its military applications, the Post said.

According to the International Atomic Energy Agency, China announced the completion of the reactor in August 2021.

Built in the middle of the Gobi Desert in the country's north, the reactor had been undergoing testing.

If the experiment proves successful, Beijing plans to construct another reactor potentially capable of generating electricity for more than 100,000 homes, the IAEA said.

## **'Thorium More Abundant, Efficient'**

China is not alone in its intentions to reap thorium's unique properties. In the past, India, Japan, the UK, the US and other countries have demonstrated enthusiasm for research into the possible application of thorium in nuclear power. The appeal of this

metal is its potential to be a more abundant and efficient substitute for uranium, the dominant nuclear fuel.

Christopher Wiernicki, chairman and chief executive of classification society the American Bureau of Shipping (ABS), [said in a magazine article last year](#) that nuclear energy has the potential to be “a disruptor” for the marine industry, transforming not only vessel operations but entire supply chains and the entire “ship-to-port interface” by providing electricity to land-based or port-related marine services, an industry leader said.

He said third and fourth generations nuclear reactors hold much promise for shipping and the advantages stretch beyond zero-carbon operations.

An [ABS study](#) showed that the adoption of advanced nuclear reactors onboard a large containership would eliminate the need for refuelling of the vessel during its entire 25-year lifespan.

Wiernicki said the study showed why the industry cannot afford to ignore the vast potential offered by nuclear propulsion both in terms of emissions reduction and operational efficiency.



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